

AMENDMENT AND PRESENTATION OF CLAIMS

Please replace all prior claims in the present application with the following claims.

1-19. (Canceled)

20. (Currently Amended) A method, comprising:

receiving an application level message from a sender application process to an access network signaling process;

encapsulating said application level message in a signaling message of an access network;
and

initiating transmission of said encapsulated application level message to a network node by transmitting said signaling message, wherein

said encapsulated application level message is transparent to ~~devices~~ a device of said access network transmitting said signaling message,

said application level message comprises an indication of conditions to deliver the application message, and

said application level message is sent after a packet data protocol context is accepted by a gateway,

said encapsulated application level message comprises a complete session initiation protocol message.

21. (Previously Presented) A method according to claim 20, wherein said sender application process is performed in a mobile terminal coupled to said access network.

22. (Previously Presented) A method according to claim 20, wherein said sender application process is performed in an application server configured to provide a corresponding application.

23. (Previously Presented) A method according to claim 20, wherein said indication comprises an address of an application server, said address being one of the group comprising a logical name, an internet protocol address, and a port number.

24. (Previously Presented) A method according to claim 20, wherein said indication comprises an indication of whether to deliver said signaling message when the quality-of-service changes.

25. (Previously Presented) A method according to claim 20, wherein said method is implemented in a call establishment procedure for a voice over the internet protocol.

26. (Previously Presented) A method according to claim 20, wherein said encapsulated application level message is included in an activation request within a packet data protocol context signaling.

27. (Previously Presented) A method according to claim 22, wherein said application server is one of the group comprising a proxy call state control function, a push proxy server, and an instant message server.

28. (Previously Presented) A method according to claim 26, wherein a session initiation protocol signaling, a resource reservation protocol signaling, or a point to point protocol signaling is embedded into said packet data protocol context signaling.

29. (Canceled)

30. (Currently Amended) A method according to ~~claim 29~~claim 20, wherein said complete session initiation protocol message is sent by a gateway general packet radio system support node to a session initiation protocol proxy, wherein said gateway general packet radio system support node is configured to create an internet protocol/user datagram protocol header and to send said complete session initiation protocol message to a session initiation protocol proxy.

31. (Previously Presented) A method according to claim 30, wherein said header is created by using information sent in an optional application level message information element.

32. (Previously Presented) A method according to claim 30, wherein said header is created by using information coming from said packet data protocol context signaling.

33. (Previously Presented) A method according to claim 30, wherein said header is created by using information coming from a configuration process.

34. (Previously Presented) A method according to claim 26, wherein said encapsulated application level message indicates that a gateway general packet radio system support node shall

send a context response message only when a response is received, as a reaction to which said gateway general packet radio system support node starts a timer to wait for an answer, and wherein a reply before the expiration of said timer is copied as a new encapsulated application level message in said context response message, and in case of no reply before the expiration of said timer, an indication that an answer was not received is copied as a new encapsulated application level message in said context response message.

35. (Previously Presented) A method according to claim 26, wherein said encapsulated application level message indicates that a gateway general packet radio system support node is configured to send a context response message immediately, as a reaction to which said gateway general packet radio system support node sends a context response message immediately, whereas a response of said receiver application process is returned to said sender application process in a non-encapsulated manner as normal traffic.

36. (Currently Amended) An apparatus, comprising:

receiving means for receiving an application level message from a sender application process to an access network signaling process;

encapsulating means for encapsulating said application level message in a signaling message of an access network, wherein said encapsulated application level message comprises a complete session initiation protocol message; and

transmitting means for initiating transmission of said encapsulated application level message to a network node, wherein

said encapsulated application level message is transparent to ~~devices~~ a device of said access network transmitting said signaling message.

said application level message comprises an indication of conditions to deliver the application message, and
said application level message is sent after a packet data protocol context is accepted by a gateway.

37. (Previously Presented) An apparatus according to claim 36, wherein a server is configured to perform said sender application process.

38. (Previously Presented) An apparatus according to claim 37, wherein said server is one of the group comprising a proxy call state control function, a push proxy server means, and an instant message server.

39. (Currently Amended) A method, comprising:

receiving an encapsulated application level message, wherein said encapsulated application level message comprises a complete session initiation protocol message;

extracting content from the encapsulated application level message;

interpreting, from the extracted content of the encapsulated application level message, an address and conditions to send the extracted content of the encapsulated application level message; and

initiate sending of the extracted content to an application server in accordance with a packet data protocol context and one or more of the interpreted address,~~a packet data protocol context~~ and an access point name configuration.

40. (Previously Presented) The method of claim 39, wherein the conditions to send the encapsulated application level message comprise when a packet data protocol context is accepted or when a packet data protocol context is accepted with a desired quality of service.

41. (Previously Presented) The method of claim 39, wherein, when the address is indicated as a logical name, the logical name is resolved from the access point name configuration or by querying a directory name service system.

42. (Previously Presented) The method of claim 39, wherein the encapsulated application level message is included in an activation request within a packet data protocol context signaling.

43. (Previously Presented) The method of claim 42, wherein a session initiation protocol signaling, a resource reservation protocol signaling, or a point to point protocol signaling is embedded into said packet data protocol context signaling.

44. (Canceled)

45. (Currently Amended) The method of ~~claim 44~~claim 39, further comprising: creating an internet protocol/user datagram protocol header; and forwarding the complete session initiation protocol message to a session initiation protocol proxy.

46. (Currently Amended) An apparatus, comprising:

~~a processor configured to;~~ and

a memory including computer program code;

the memory and the computer program code configured to, with the processor, cause the apparatus to perform at least the following,

receive an encapsulated application level message,

extract content from the encapsulated application level message, wherein said encapsulated application level message comprises a complete session initiation protocol message,

interpret, from the extracted content of the encapsulated application level message, an address and conditions to send the extracted content of the encapsulated application level message, and

initiate sending of the extracted content to an application server in accordance with a packet data protocol context and one or more of the interpreted address, ~~a packet data protocol context~~ and an access point name configuration.

47. (Previously Presented) The apparatus of claim 46, wherein the conditions to send the encapsulated application level message comprise when a packet data protocol context is accepted or when a packet data protocol context is accepted with a desired quality of service.

48. (Previously Presented) The apparatus of claim 46, wherein, when the address is indicated as a logical name, the apparatus is configured to resolve the logical name from the access point name configuration or by querying a directory name service system.

49. (Previously Presented) The apparatus of claim 46, wherein the apparatus is configured to include the encapsulated application level message in an activation request within a packet data protocol context signaling.

50. (Previously Presented) The apparatus of claim 49, wherein the apparatus is configured to embed a session initiation protocol signaling, a resource reservation protocol signaling, or a point to point protocol signaling into said packet data protocol context signaling.

51. (Previously Presented) The apparatus of claim 49, wherein said encapsulated application level message comprises a complete session initiation protocol message.

52. (Previously Presented) The apparatus of claim 51, wherein the processor is further configured to

create an internet protocol/user datagram protocol header, and

initiate sending of the complete session initiation protocol message to a session initiation protocol proxy.

53. (Currently Amended) An apparatus, comprising:

~~a processor configured to; and~~

a memory including computer program code;

the memory and the computer program code configured to, with the processor, cause the apparatus to perform at least the following,

receive an application level message from a sender application process to an access network signaling process,

encapsulate said application level message in a signaling message of an access network,
wherein said encapsulated application level message comprises a complete session
initiation protocol message, and
initiate transmission of said encapsulated application level message to a network node,
wherein
said encapsulated application level message is transparent to ~~devices~~ a device of said access
network transmitting said signaling message,
said application level message comprises an indication of conditions to deliver the
application message, and
said application level message is sent after a packet data protocol context is accepted by a
gateway.

54. (Previously Presented) An apparatus according to claim 53, wherein said apparatus comprises a mobile terminal.

55. (Previously Presented) An apparatus according to claim 53, wherein said indication comprises an address of an application server, said address being one of the group comprising a logical name, an internet protocol address, and a port number.

56. (Previously Presented) An apparatus according to claim 53, wherein said indication comprises an indication of whether to deliver said signaling message when the quality-of-service changes.

57. (Previously Presented) An apparatus according to claim 53, wherein the apparatus is configured to transmit the encapsulated application level message as part of a call establishment procedure for a voice over the internet protocol.

58. (Previously Presented) An apparatus according to claim 53, wherein the apparatus is configured to include said encapsulated application level message in an activation request within a packet data protocol context signaling.

59. (Previously Presented) An apparatus according to claim 58, wherein said apparatus is configured to embed a session initiation protocol signaling, a resource reservation protocol signaling, or a point to point protocol signaling into said packet data protocol context signaling.

60. (Canceled)

61. (Previously Presented) An apparatus according to claim 58, wherein said encapsulated application level message indicates that a gateway general packet radio system support node is configured to send a context response message only when a response is received, as a reaction to which said gateway general packet radio system support node starts a timer to wait for an answer, and wherein a reply before the expiration of said timer is copied as a new encapsulated application level message in said context response message, and in case of no reply before the expiration of said timer, an indication that an answer was not received is copied as a new encapsulated application level message in said context response message.

62. (Currently Amended) A system, comprising:

a network node; and

a user equipment comprising

a receiver configured to receive an application level message from a sender application process to an access network signaling process,

a processor configured to encapsulate said application level message in a signaling message of an access network, wherein said encapsulated application level message comprises a complete session initiation protocol message, and

a transmitter configured to transmit said encapsulated application level message to ~~a-the~~ network node; ~~and,~~

wherein the network node comprises a network node comprising

a receiver configured to receive the encapsulated application level message, a processor configured to

interpret, from the encapsulated application level message, an address and conditions to send the encapsulated application level message, and

extract content from the encapsulated application level message, and

a transmitter configured to forward the extracted content to an application server in accordance with one or more of the interpreted address, a packet data protocol context and an access point name configuration, wherein

said encapsulated application level message is transparent to ~~devices~~ a device of said access network transmitting said signaling message. and

said application level message comprises an indication of conditions to deliver the application message.